

## REMARKS

Claims 1-3 are pending in this application. Claims 1-2 are rejected and claim 3 is cancelled. None of the claims are currently amended.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Kallio (US 2004/0014422 A1) in view of Nakamura (US 6,157,626) in view of Labonte (US 6,259,918) in view of Feder (US 6,522,881 B1). Relative to the previous rejection, Labonte has replaced Zhang (US 2002/0145968 A1) in the examiner's argument. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). The new combination of references still fails to disclose or suggest the claimed limitation of "transmission of an association bid message from a mobile wireless terminal device to a particular fixed location device, the bid message being a request to communicate in the wireless communications environment via the particular fixed location device, and wherein a decision to send a bid message is based at least in-part on an indication that the receiving device is capable of providing better service as a function of magnitude of intentional transmitter power attenuation by the particular fixed location device."

The Examiner asserts that Nakamura teaches transmission of a *bid message* from a mobile wireless device to a fixed-location device where the fixed-location device is calculated to be capable of providing best service (col. 4, lines 63-65 and col. 5, lines 28-34), and that Labonte teaches that best service is a function of *power attenuation of the transmitter of the fixed-location device* (col. 2, lines 55-64; col. 3, lines 10-30; col. 4, lines 55-62; col. 7, lines 15-25; and col. 8,

lines 2-4). As will be shown, neither reference actually discloses the portion of the claim limitation against which it is cited.

Generally, transmission power is attenuated in two different ways: *over-the-air* and *by the transmitter*. *Over-the-air* attenuation of transmission power includes attenuation as a function of distance from the transmitter. *Over-the-air* transmission attenuation also includes attenuation by obstacles between the transmitter and receiver. Short of moving the transmitter and receiver closer together and removing obstacles, *over-the-air* transmission power attenuation is a natural condition that cannot be changed and is not an intentional action taken to accomplish any network management goal. Intentional transmission power attenuation *by the transmitter* is used to reduce RF footprint and thereby decrease the chance of interference with other devices. In other words, the amount of electrical energy that a wireless device puts into a transmitter to cause a signal to be transmitted can be intentionally reduced in order to transmit a weaker signal, i.e., before the signal ever reaches the air. However, intentional transmission power attenuation *by the transmitter* complicates evaluation of fixed-location wireless devices.

In a wireless environment where a fixed-location device reduces its own transmit power in order to reduce RF footprint, it is difficult for a mobile device to evaluate that fixed-location device. When that fixed-location device is operating at full power the mobile device can generally evaluate the fixed-location device based on received signal strength and other factors, as has been done in the art for some time. However, when the fixed-location device is operating at a lowered transmit power, it will appear to be a poor candidate for association because of that lowered signal strength.<sup>1</sup> This is a problem because that fixed-location device may actually be a very good candidate based on ability to operate at higher power, e.g., since the fixed-location

device is only powered-down because no mobile devices currently require higher transmission power from the fixed-location device. It would therefore be useful for mobile devices to be able to quickly and efficiently determine whether a fixed-location device can increase power, and by how much.

In view of the above it will be appreciated that Nakamura fails to disclose transmission of a bid message from a mobile wireless device to a fixed-location device where the fixed-location device is calculated to be capable of providing best service. Nakamura states that cell judgment unit 38 judges a cell of a base station and “notifies the read out perch channel spread code identification number to the control unit 35 as a judgment result,”<sup>2</sup> following which “the control unit 35 then carries out the subsequent control based on the cell judgment result by regarding a cell of a base station which transmitted the perch channel corresponding to the notified perch channel spread code identification number as the located cell.”<sup>3</sup> Because the control unit carries out subsequent control based on the cell judgment result by regarding the cell as the located cell, it is clear that this is not a bid message. In particular, the cell selection decision made by Nakamura’s mobile device is not merely a request, but is a command. In contrast, a bid message is merely a request to become associated with a fixed-location device.<sup>4</sup> Such a request is not automatically granted, but is subjected to a selection process.<sup>5</sup> It should be noted that the use of a bid rather than a command is desirable because the bid/selection auction helps dampen excessive

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<sup>1</sup> Note that attenuation of transmit power by the access point is NOT the path loss.

<sup>2</sup> Column 5, lines 62-67

<sup>3</sup> Column 6, lines 1-5

<sup>4</sup> As defined at page 44, lines 15-19, “the STA receives and processes DRCP Announcements from all APs that are operating within its range on any of its supported channels. It evaluates the received power and loading information from the Announce messages and if it finds an AP to which it would be more optimally associated than its current AP, the STA **makes a bid to move** to that AP.” (emphasis added)

<sup>5</sup> Page 42, lines 9-14

migration of mobile wireless devices between fixed-location devices. Because Nakamura fails to disclose a bid message, the reference fails to disclose the feature against which it is cited.

Labonte also fails to support the examiner's argument. As described in the background of Labonte, base stations use multiple directional antennas which enable extended coverage range. However, as stated at column 2, lines 30-33, such antennas create a problem because they disturb the location of the border between cells. Since handoffs generally occur in the vicinity of the cell border, the purpose of Labonte is to "more precisely locate the mobile station and uniformly, predictably and accurately identify when it is appropriate to authorize handoff." (Abstract) As described generally at column 7, line 15 through column 8, line 12, and more specifically at 36-50, the signal strength measurements made by the mobile station must be adjusted to compensate for the operational and physical differences between the sector and smart antennas. In other words, given multiple different received signal strength measurements from a base station, Labonte describes a technique for combining those measurements to obtain one received signal strength measurement from which the location of the mobile station relative to the border can be calculated. However, it is still received signal strength rather than attenuated signal strength that is used, and Labonte fails to disclose any means for evaluating whether a base station could increase power to provide a stronger signal. The examiner cites the power backoff values at column 3, lines 10-30 as being equivalent to accounting for intentional power backoff by a base station. However, as described at column 4, lines 52-58, what Labonte actually does is account for differences in antenna/channel combinations. In particular, "the [Labonte] backoff identifies whether the power level of the control channel differs from the power level of the traffic channel in each cell," which is reasonable when trying to evaluate a base station that is using multiple antennas and channels, but has nothing to do with determining whether a base station could

increase power to provide a better signal if the mobile station were to associate with that base station. In sum, although some similar terminology is used, both the problem and the solution differ between Labonte and the claimed invention.

For the reasons stated above, it will be appreciated that the cited combination fails to disclose a bid message, and further fails to disclose determining where to send the bid message based at least in-part on service quality as a function of magnitude of intentional transmitter power attenuation by the particular fixed location device. Should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Applicants' Attorney at the number listed below so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted,

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Date

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